Does the extent of lymphadenectomy have an impact on in-hospital mortality and reoperations after TME for esophageal cancer?

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2017 Bern Berne Berna
31. Mai – 2. Juni
31 mai – 2 juin
31 maggio – 2 giugno

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Background I

- Patient selection, perioperative care

- Modified surgical techniques

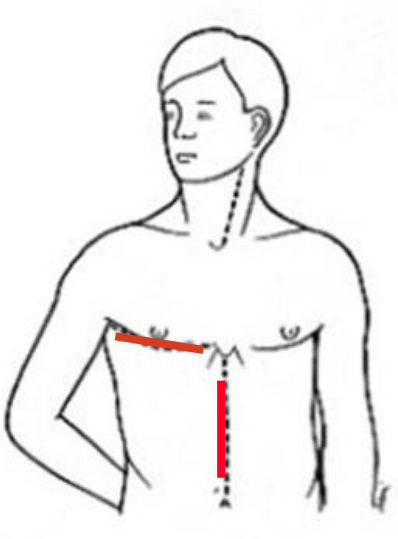
- Neoadjuvant treatment concepts

➢have led to better outcomes in locally advanced esophageal cancer during the last decades

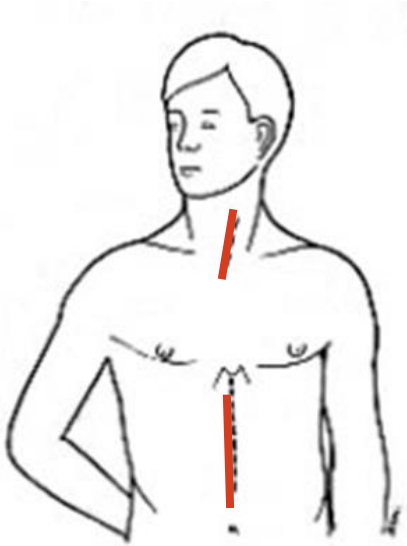
Background II

However the effect of the extent of lymphadenectomy during surgery for esophageal cancer on outcomes is currently questioned.

TTE



TME



Rizk, N. P. et al. Optimum lymphadenectomy for esophageal cancer. Annals of surgery, 2010.
Lagergren, et al. Extent of Lymphadenectomy and Prognosis After Esophag eal Cancer Surgery. JAMA surgery, 2016.

Aim of the study

- To investigate the *effect of the extent of removed lymph nodes* on *early reoperations and in-hospital mortality and morbidity* in patients undergoing **TME** for esophageal cancer.

- Main focus on the last decade (16 years)
- Single center, retrospective study
- Prospective evaluation of patients since 2001
- Logistic regression analysis

Outcome

Primary Outcome:

Early reoperations and in-hospital mortality

Secondary Outcomes:

Epidemiology and Tumor characteristics

Perioperative complications

Total number of Lymph nodes (Ln) and ≥ or < 15 Ln

Survival rate

Surgical approach and nRCT

Periode (10/01– present)	n=314
Cancer cases treated with TME included	n= 247
Systemic neoadjuvant treatment nRCT (T3+/N+)	n= 189 76.5 %

Demographics and tumor characteristics

Tumor site	
Upper	0.5 %
Mid	12.2 %
Lower thoracic/AEG I	87.3 %
Sex (m/f)	77.2/ 22.8 %
Age (y)	67 (IQR 14)
ASA III	51.1%
Histology	
Squamous cell	20.8%
Adenocarcinoma	74.3%
Other	4.4 %

Tumor characteristics

Clinical T stage	
III-IV	60 %
Clinical N stage	
N+	71.6%
Resection	
RO	96 %
Resected lymph nodes (mean)	26 (2-82)

Mortality + reoperations

Mortality

In hospital

2.8 %

1x Respiratory failure
2x Heart failure
1x ARDS
1x Pneumonia, 1x MOF, 1x PE

Reoperations

6.4%

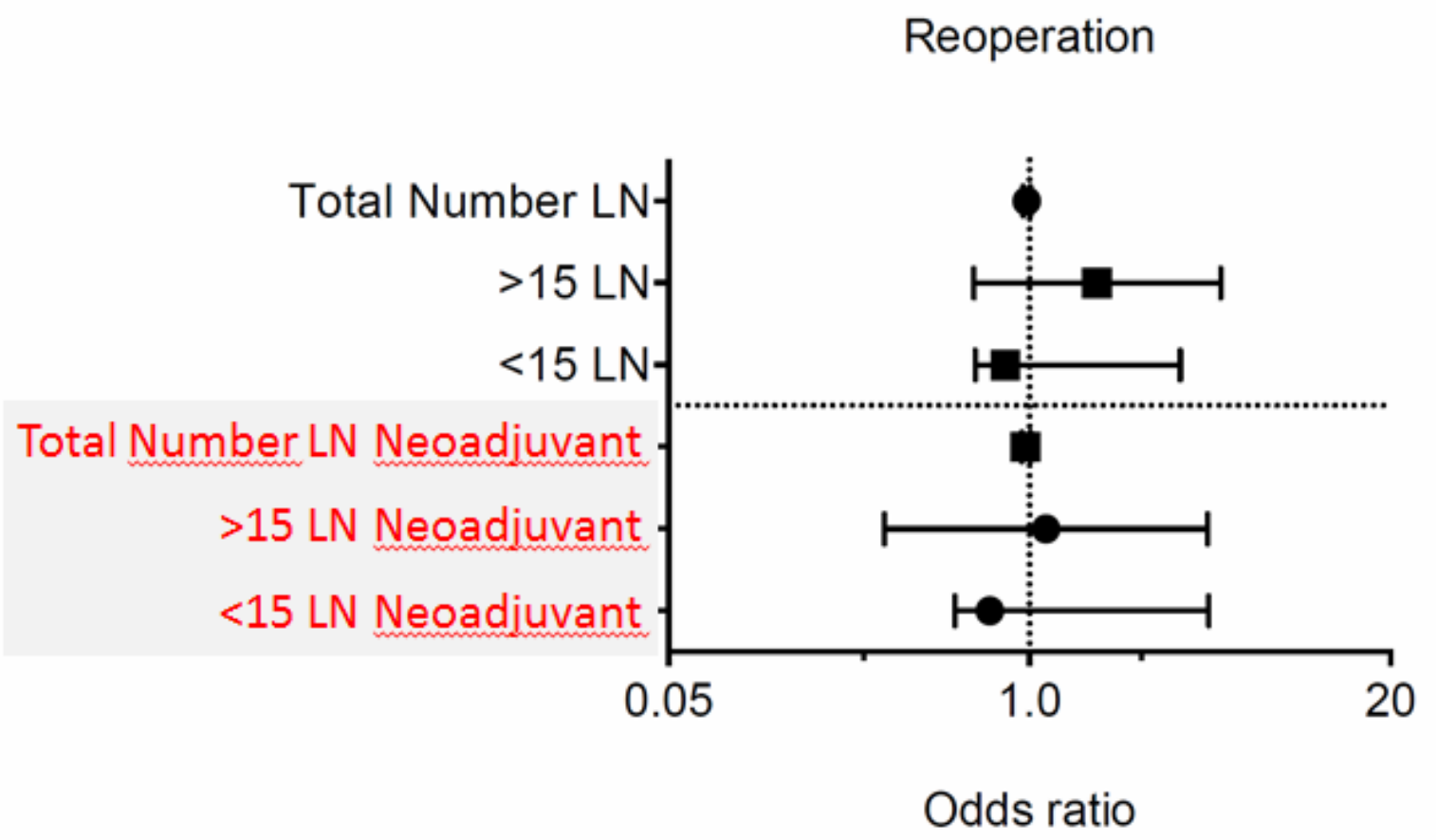
4x Lekage
2x Haemtoma
2x Cardiac tamponade,
1x Perforation (colon)
1x Bronchopulmonal fistula,
2x Eviszeration, 2x Ileus, 1x Diaphragmatic hernia, 1x Pancreatitis

Morbidity

	2001-2017
	TME (n=247)
Complications	
Pulmonal	24%
ARDS	1.5%
Anastomotic leak	12 %
Hemorrhage	2.2%
Wound infection	11.8%
Recurrent Laryngeal Nerve Paralysis (trans.)	4.5%

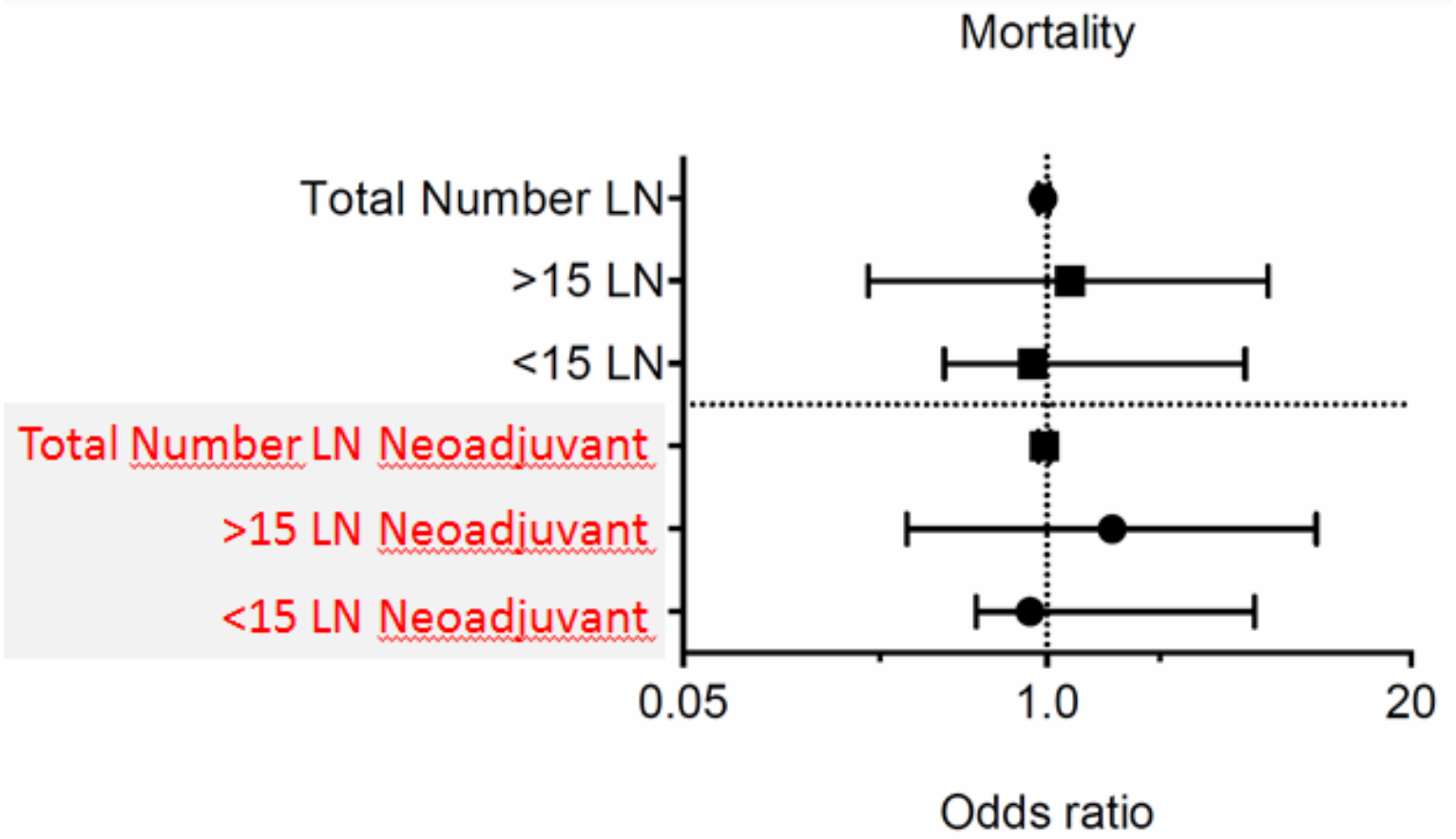
Ln harvested and risk of reoperation (n=247)

subgroup after nRCT (n=189)



Ln harvested and risk of mortality (n=247)

subgroup after nRCT (n=189)



p=0.338

p=0.819

p=0.856

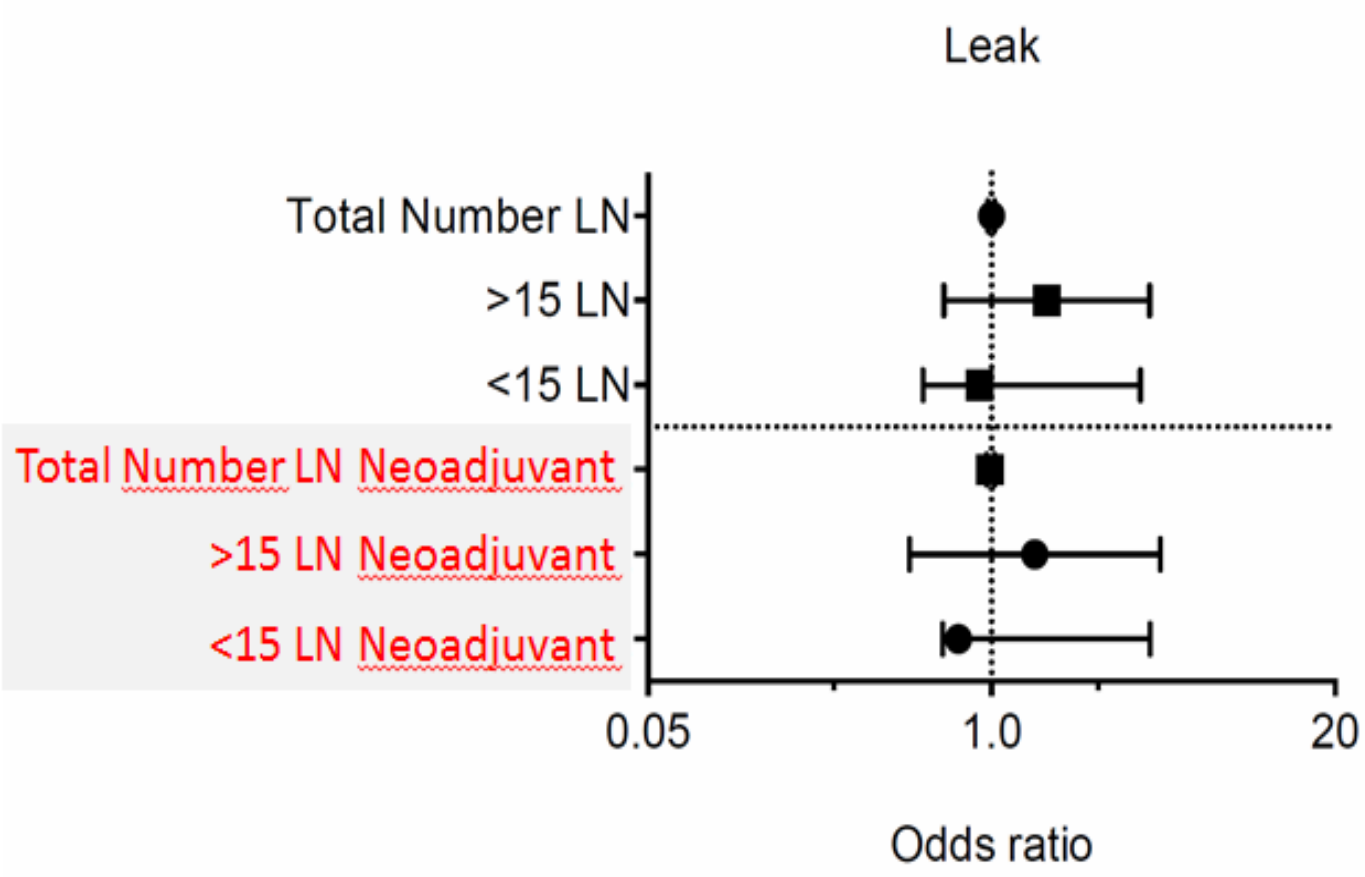
p=0.833

p=0.530

p=0.494

Ln harvested and risk of morbidity (n=247)

subgroup after nRCT (n=189)



p=0.881

p=0.921

p=0.872

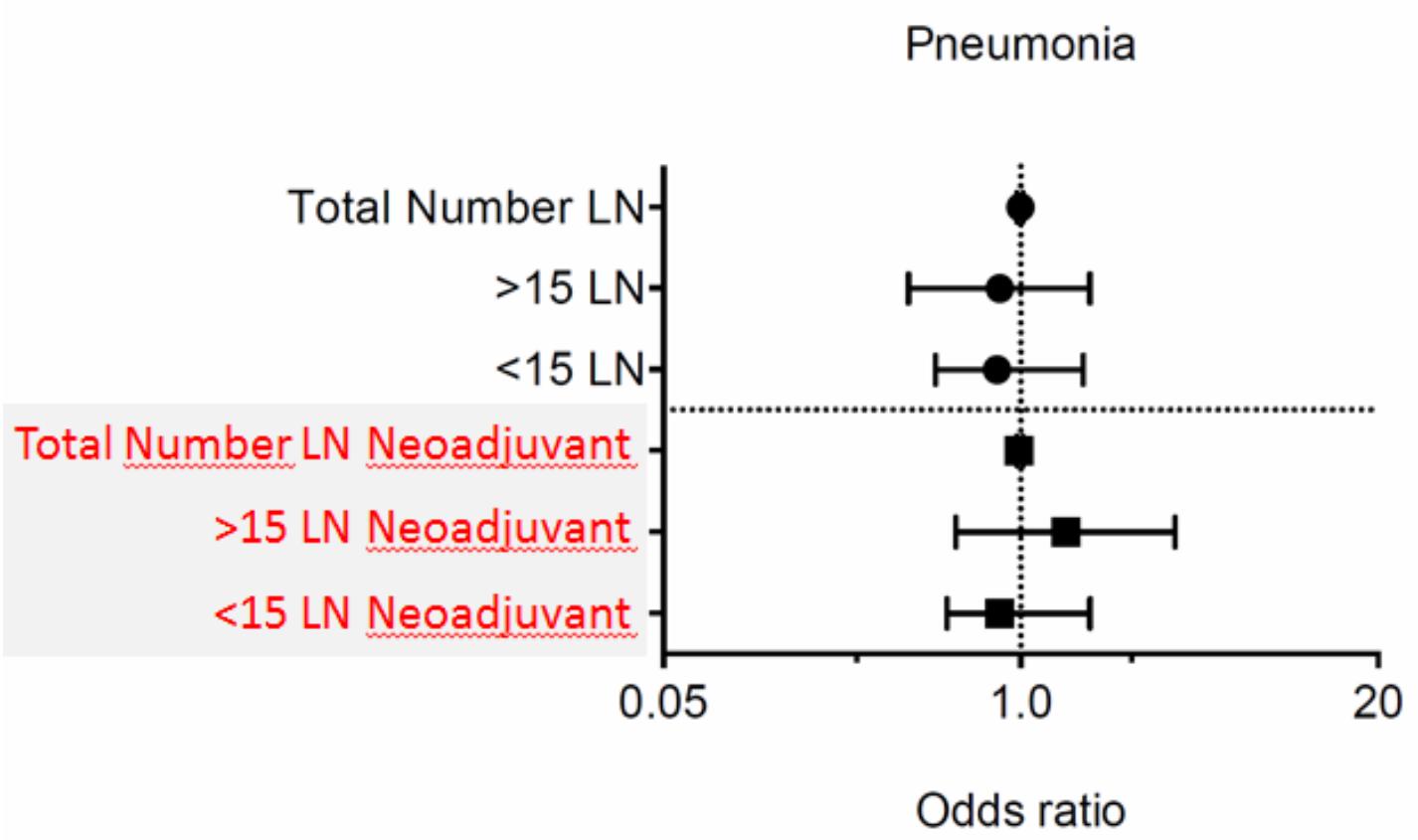
p=0.692

p=0.858

p=0.779

Ln harvested and risk of morbidity (n=247)

subgroup after nRCT (n=189)



p=0.816

p=0.663

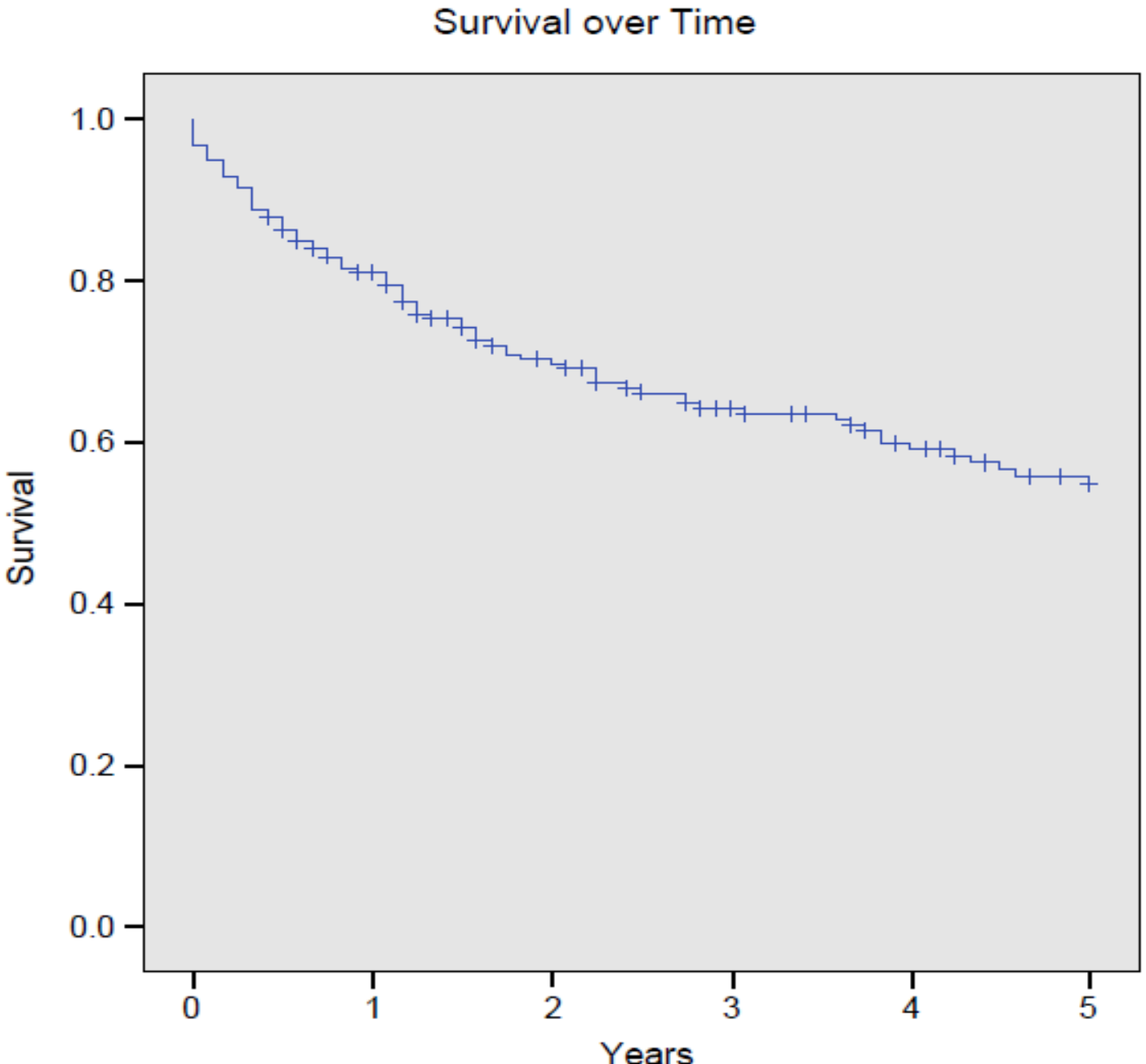
p=0.552

p=0.767

p=0.414

p=0.652

Overall survival



Conclusion

Extended lymphadenectomy is not associated with an increased rate of reoperations and in-hospital morbidity + mortality

(incl. after neoadjuvant treatment)

Extended lymphadenectomy in patients with TME can be regarded as a safe procedure

Thank you